

## **SECTION 00878**

# **POTASSIUM ACETATE**

## **PART 1 GENERAL**

### **1.1 SECTION INCLUDES**

- A. UDOT specification for acetate-based fluid used in Fixed Automated Spray Technology (FAST) systems.

### **1.2 REFERENCES**

- A. ASTM D1177: Standard Test Method for Freezing Point of Aqueous Engine Coolants
- B. ASTM D1293: Standard Test Methods for pH of Water
- C. ASTM D6080: Standard Practice for Defining the Viscosity Characteristics of Hydraulic Fluids

### **1.3 QUALITY ASSURANCE**

- A. Sampling, supplier-delivered material:
  - 1. Deliver to specified site.
  - 2. Notify Department of delivery date and time.
  - 3. UDOT samples by random one sample for each delivery site
- B. Compliance: Supplier is liable for all UDOT testing costs of non-complying materials.
- C. Non-compliant product: If any delivery contains product that does not meet the specifications listed below, the supplier will remove and replace the entire chemical at no cost to UDOT.
- D. Two non-compliant shipments per contract year may result in contract termination.

## **PART 2      PRODUCTS**

### **2.1      Potassium Acetate**

- A.      Deliver product with the following properties:
  - 1.      Is clear, mobile liquid, free from matter in suspension, with pH in the range of 9.5 to 11.5 according to ASTM D1293.
  - 2.      Is a minimum of 50% potassium acetate by weight with a freezing point of -70°F (-57°C) or lower according to ASTM D1177.
  - 3.      Has a specific gravity at 20°C that is between 1.25-1.30.
  - 4.      Is compliant with U.S. EPA requirements for acute aquatic toxicity and has a 48-hour LC50 that is above 1000mg/L.
  - 5.      Has a biochemical oxygen demand (BOD) that is less than 0.34 grams oxygen/gram.
  - 6.      Is manufactured using ISO 9001 certified processes.
  - 7.      Will not weaken or soften bituminous materials, namely asphalt concrete.
  - 8.      Contains less than 1% corrosion inhibitors.
  - 9.      Has a biodegradability of 90% or greater at 0°C.
  - 10.     Has a viscosity between 20 centipoise (cp) and 25cp at 0°C.
  - 11.     Will not separate during storage.

## **PART 3      EXECUTION**

### **3.1      DELIVERY**

- A.      Delivery: Deliver 500-gallon lots to the location listed on the bid schedule. Notify station supervisor twelve hours prior to delivery. Pump solution into state-owned tanks at no additional cost using pumps with a minimum capacity of 500 gallons per minute.
- B.      Delivery Location:
  - 1.      Knudsen's Corner located under Interstate-215 at 6200 South in Sandy, Utah.

**END OF SECTION**